

REMARKS/ARGUMENTS

Reconsideration and allowance of the subject application are respectfully requested.

Claims 51-59, 71-72, 74, and 76-85 are pending in the application. Claims 1 and 84 are independent.

Applicants have added new Claims 84-85 to afford themselves a scope of protection commensurate with the disclosure. The new claims are fully supported in the specification and Drawings (see Figs 2a and 2b, and paragraphs [0027] and [0051] of the published specification), and are believed to be allowable for the reasons to be developed below.

Claims 51-59, 71-72, 74, and 76-83 were rejected as being unpatentable over Bourgault, McIlhargey, and Rawson, for the reasons discussed at pages 2-6 of the Office Action. Applicants respectfully traverse all art rejections.

Independent Claim 51 recites a novel, non-obvious combination of structure whereby a conservation tillage implement includes a cultivator frame, and a plurality of individual coulter wheel assemblies. The plurality of individual coulter wheel assemblies includes at least two left-side coulter wheel assemblies and at least two right-side coulter wheel assemblies. Each of the coulter wheel assemblies includes a coil spring having a horizontal axis to cause the coulter wheel assembly to move vertically as the coulter wheel assembly moves through a field. Notably, the coil springs of the at least two left-side coulter wheel

assemblies are wound opposite to the winding of the coil springs of the at least two right-side coulter wheel assemblies. A plurality of mounting structures are provided, each corresponding to one of the plurality of individual coulter wheel assemblies. Each mounting structure includes pivot structure that permits the corresponding coulter wheel assembly to at least partially rotate horizontally about a vertical axis as the corresponding coulter wheel assembly moves through the field. The cultivator frame is configured to receive the plurality of mounting structures such that the plurality of individual coulter wheel assemblies are disposed in three or more longitudinally spaced apart rows of laterally spaced apart individual coulter wheel assemblies. Each coulter wheel assembly is individually mounted to the frame using the mounting structure. A coulter wheel assembly in a given row is staggered with respect to the coulter wheel assemblies in a longitudinally adjacent row in order to reduce plugging of crop residue between the coulter wheels.

In contrast, and as set forth in the July 10, 2007 Amendment, Bourgault does not disclose a tillage implement. The title of Bourgault is "Mid-Row Banding Coulter Drill". Drills are used in the planting of crops, not in the tillage of fields, which necessarily takes place prior to planting. The apparatus of Bourgault is described in column 3, line 62 as a "seeding implement", not a tillage implement as claimed in claim 51. The apparatus of Bourgault would not be suitable for use as a tillage implement and cannot be construed as such. Bourgault therefore can not anticipate the tillage implement

of claim 51.

Furthermore, Bourgault explicitly describes, at column 2, lines 22-27, that: "The disk coulters are fixedly mounted to the horizontal cross bars of the frame of the implement... ." Thus, Bourgault also fails to disclose or suggest the pivot structure of Claim 51.

Bourgault also fails to disclose or suggest the opposite-side coil-winding feature of Claim 51. This feature is important (as discussed at paragraphs [0027] and [0051] of the published specification) to alleviate any problem of sideways drift that may occur during operation. Neither this problem nor any solution therefor is disclosed or suggested by any of the art of record in this case. On the other hand, Applicants have not only recognized this problem, but designed a workable solution thereto, thus providing a unique advantage to the conservation tillage implement according to the claimed invention. Therefore, Claim 51 and its dependent claims are fully patentable over the cited art, whether that art is taken individually or in combination.

Independent Claim 84 recites a novel, non-obvious combination of structure whereby a conservation tillage implement includes a frame having plural rows of transverse members disposed transverse to an implement direction of travel, where the transverse members are coupled to plural parallel members that are disposed parallel to the implement direction of travel. Plural coulters include at least three left-side coulters and at least three right-side coulters. Each of the at least three

left-side coulter wheel assemblies and the at least three right-side coulter wheel assemblies includes a coil spring having a horizontal axis and configured to permit a corresponding coulter wheel assembly to move upward when contacting a ground obstacle./ Notably, each of the at least three left-side coulter wheel assemblies is coil-wound opposite to the coil-winding of each of the at least three right-side coulter wheel assemblies. Plural coulter wheel mounting assemblies are provided for respectively coupling the plural coulter wheel assemblies to the plural rows of transverse members such that each coulter wheel assembly is staggered in the implement direction of travel with respect to coulter wheel assemblies in adjacent rows of transverse members. Each coulter wheel mounting assembly including mounting structure configured to couple the corresponding coulter wheel assembly to the corresponding transverse member such that the corresponding coulter wheel assembly can be coupled at different transverse positions on the transverse member.

As discussed above, none of art of record in this case (including Bourgault, McIlhargey, and Rawson, whether taken alone or in combination) discloses or suggests the combination of features set forth in Claim 84, including, *inter alia*, the opposite-side coil-winding feature. Therefore, Claim 84 is also fully patentable over the cited art.

Request for Personal Interview

The undersigned hereby requests a personal interview with the Examiner to discuss the above-noted differences between the present invention and the cited art. The Examiner is respectfully requested to telephone the undersigned at (202) 625-3507 so that an interview may be arranged at a time convenient to the examiner.

In view of the above, it is believed that this application is now in condition for allowance, and a Notice thereof is respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 625-3507. All correspondence should continue to be directed to the address of record.

Respectfully submitted,

/Richard P. Bauer/
Attorney for Applicants
Richard P. Bauer
Registration No. 31,588

PATENT ADMINISTRATOR
KATTEN MUCHIN ROSENMAN LLP
2900 K Street, N.W.
Suite 200
Washington, D.C. 20007-5118